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Challenges and opportunities toward sustainable consumption and value addition of cashew apples in Tanzania

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Abstract

Cashew apple is an important healthy fruit due to its high nutrient contents, particularly vitamin C. However, its full potential is yet to be realized in low technological countries. This paper explores farmers' consumption habits, processing methods, and utilization constraints faced. Also, osmotic-solar dried product was developed. In an exploratory survey, 600 farmers across the surveyed districts were interviewed. The study revealed that the majority of farmers consume raw cashew apples, with 61.9% consuming more than five fruits a day and about 56.0% consuming almost every day during the season. About 43.7% of farmers traditionally process cashew apple porridge and alcohol. Lack of knowledge on post-harvest handling (86.2%), and processing technologies (82.7%) were mostly claimed to hamper the utilization. The developed dried products retained 59.4% of total acidity, 37.4% of total ascorbic acid, and 68.5% tannins. In addition, the product received better sensory scores and overall acceptability. Though solar drying relies heavily on weather conditions, where possible it could be a better alternative to traditional methods. The combination of blanching, osmotic dehydration and solar drying could provide economically feasible value added products to both urban and rural settings and ultimately reduce the post-harvest losses and unleash their economic potential.

Keywords

Cashew apple, utilization constraints, post-harvest losses, solar drying, osmotic dehydration